

# Banks Lake Drawdown

---

## Draft Environmental Impact Statement



U.S. Department of the Interior  
Bureau of Reclamation  
Pacific Northwest Region  
Boise, Idaho

Upper Columbia Area Office  
Ephrata Field Office  
Ephrata, Washington

January 2003

**Draft Environmental Impact Statement  
Banks Lake Drawdown  
Douglas and Grant Counties, Washington**

Lead Agency: U.S. Department of the Interior  
Bureau of Reclamation

For further information contact: Jim Blanchard  
Special Projects Officer  
Ephrata Field Office  
Bureau of Reclamation  
Box 815  
Ephrata, WA 98823  
(509) 754-0226

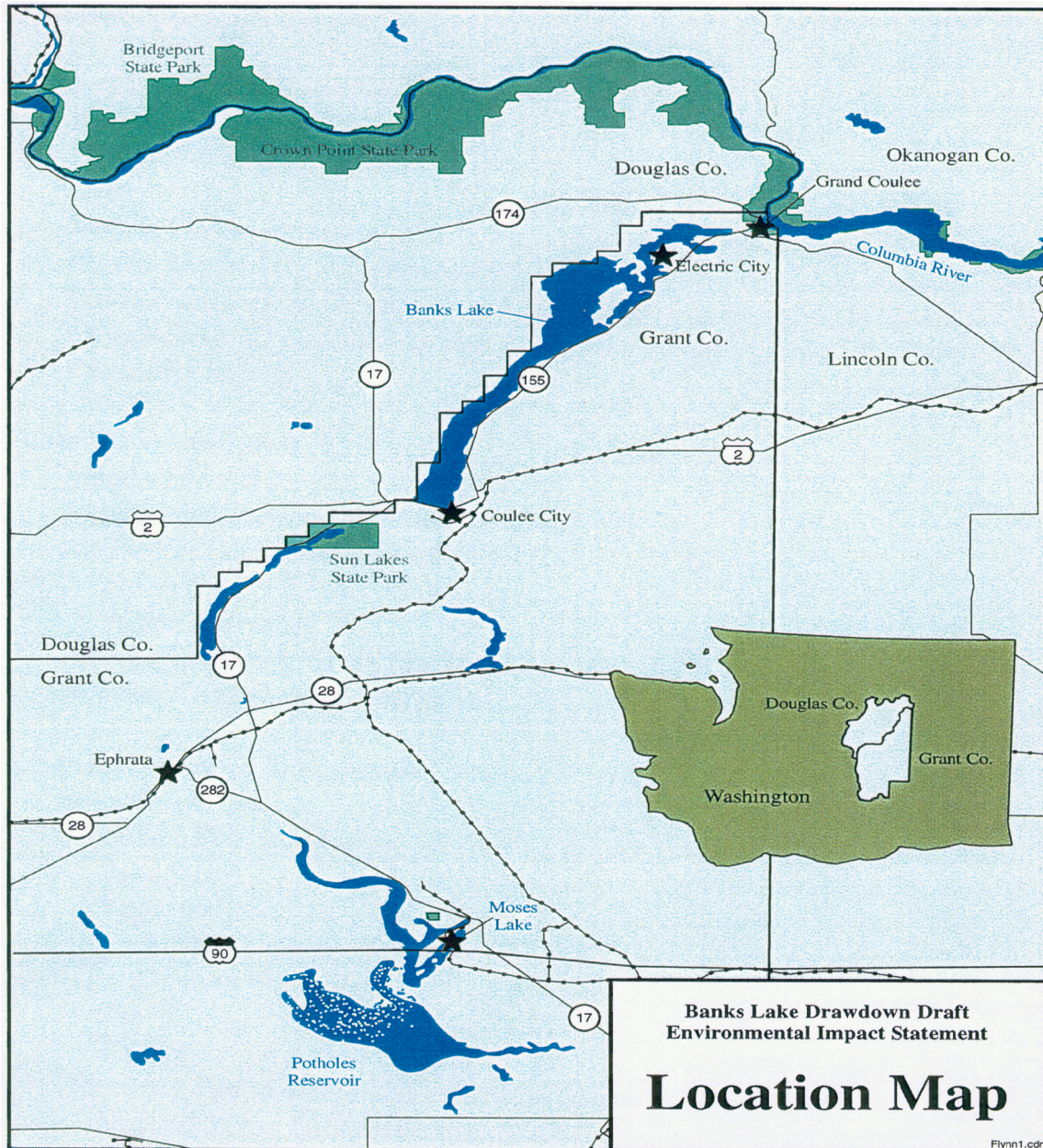
This draft environmental impact statement analyzes the environmental impacts of the proposed action to lower the water surface elevation for Banks Lake from 1565 feet to 1560 feet in August of each year.

The Action Alternative describes the resource conditions that would occur with Banks Lake surface elevations between 1570 feet and 1560 feet, while the No Action Alternative describes the conditions that would occur without the proposed action, surface elevation between 1570 feet and 1565 feet. Both the No Action and Action Alternatives include four potential operational scenarios that could occur within their respective ranges. The Action Alternative includes refilling the reservoir to elevation 1565 feet, beginning September 1 and ending no later than September 10.

The draft environmental impact statement provides Reclamation's determination that the Action Alternative "may affect but is not likely to adversely affect" the federally listed bald eagle (*Haliaeetus leucocephalus*) and would have no effect on the federally listed pygmy rabbit (*Brachylagus idahoensis*) or Ute ladies'-tresses (*Spiranthes diluvialis*). Reclamation's determination will be provided to the U.S. Department of the Interior's Fish and Wildlife Service as part of the informal consultation process in compliance with section 7(a)(2) of the Endangered Species Act of 1973 as amended and codified in 50 CFR 402.

This analysis is being done in compliance with Action 31 of the Reasonable and Prudent Alternative under the December 2000 Biological Opinion issued by the National Marine Fisheries Service (NMFS) for operation of the Federal Columbia River Power System. Therefore, additional ESA consultation with NMFS is not necessary.







# CONTENTS

---

	<i>page</i>
Acronyms and Abbreviations .....	xi
Summary .....	S-1
Purpose and Need .....	S-1
Issues .....	S-1
Location and General Description of Affected Area .....	S-2
Alternatives Including the Proposed Action .....	S-2
No Action Alternative .....	S-3
Action Alternative .....	S-3
Summary Comparison of the Environmental Impacts of the Alternatives .....	S-6
Summary of Environmental Commitments for Proposed Action .....	S-8
Regional/Local Economy and Recreation .....	S-8
Historic Resources .....	S-9
Traditional Cultural Properties .....	S-9
Native American Sacred Sites .....	S-9
Coordination Act Report Recommendations .....	S-9
Chapter 1—Purpose of and Need for Action .....	1-1
Purpose and Need .....	1-1
Decisions to Be Made .....	1-1
Scope .....	1-2
Scoping Process and Issues .....	1-2
Permits Required for Implementation .....	1-3
Location and General Description of Affected Area .....	1-3
Other Related Actions and Activities .....	1-5
Environmental Assessment—Banks Lake Resources Management Plan ....	1-5
Federal Columbia River System Operations Biological Opinion .....	1-6
Grant County Comprehensive Plan .....	1-6
Steamboat Rock Bald Eagle Nest Territory Management Plan .....	1-6
Castle Rock Natural Area Preserve Management Plan .....	1-6
Grant County Shorelines Management Master Program .....	1-7
Douglas County Comprehensive Plan .....	1-7
Spokane Resource Management Plan .....	1-7
Groundwater Management Area .....	1-7
Columbia Basin Wildlife Area Management Plan .....	1-7
Chapter 2—Alternatives .....	2-1
Introduction .....	2-1
Alternatives Development Process .....	2-1
Alternatives Considered in Detail .....	2-4

**Banks Lake Drawdown**  
**Draft Environmental Impact Statement**

---

No Action Alternative .....	2-5
Action Alternative .....	2-7
Alternatives Considered but Eliminated .....	2-8
Summary Comparison of Alternatives .....	2-10
Chapter 3—Affected Environment .....	3-1
Introduction .....	3-1
Vegetation, Fish, and Wildlife .....	3-1
Background .....	3-1
Vegetation .....	3-2
Fish .....	3-10
Wildlife .....	3-18
Threatened, Endangered, and Special Status Species .....	3-21
National Marine Fisheries Service .....	3-21
Fish and Wildlife Service .....	3-21
Species of Concern .....	3-26
Economics .....	3-30
Hydropower Resources .....	3-30
Regional/Local Economy .....	3-34
Recreation .....	3-37
Land-Based Recreation .....	3-38
Day Use Activities .....	3-39
Water-Based Recreation .....	3-40
Boat Launch Sites .....	3-42
Irrigated Agriculture .....	3-42
Historic Resources .....	3-42
Previous Investigations .....	3-43
Prehistoric Sites .....	3-44
Historic Sites .....	3-44
Traditional Cultural Properties .....	3-44
Indian Trust Assets .....	3-45
Environmental Justice .....	3-45
Surface Water Quality .....	3-47
Groundwater Quality .....	3-49
Native American Sacred Sites .....	3-50
Visual Quality .....	3-50
Scenic Quality Ratings .....	3-51
Air Quality .....	3-52
Soils .....	3-53
Social Environment .....	3-53

---

Chapter 4—Environmental Consequences .....	4-1
Introduction .....	4-1
Vegetation, Fish, and Wildlife .....	4-1
Background .....	4-1
Vegetation .....	4-2
Fish .....	4-8
Wildlife .....	4-15
Threatened, Endangered and Special Status Species .....	4-17
No Action Alternative .....	4-17
Action Alternative .....	4-18
Economics .....	4-20
Hydropower Resources .....	4-20
Regional/Local Economy .....	4-27
Recreation .....	4-31
No Action Alternative .....	4-31
Action Alternative .....	4-31
Mitigation .....	4-33
Irrigated Agriculture .....	4-33
No Action Alternative .....	4-33
Action Alternative .....	4-33
Historic Resources .....	4-34
No Action Alternative .....	4-34
Action Alternative .....	4-34
Mitigation .....	4-34
Traditional Cultural Properties .....	4-34
No Action Alternative .....	4-34
Action Alternative .....	4-35
Mitigation .....	4-35
Indian Trust Assets .....	4-35
No Action Alternative .....	4-35
Action Alternative .....	4-35
Environmental Justice .....	4-35
No Action Alternative .....	4-36
Action Alternative .....	4-36
Surface Water Quality .....	4-36
No Action Alternative .....	4-36
Action Alternative .....	4-38
Groundwater Quality .....	4-40
No Action Alternative .....	4-40
Action Alternative .....	4-40
Native American Sacred Sites .....	4-40
No Action Alternative .....	4-41
Action Alternative .....	4-41
Mitigation .....	4-41

**Banks Lake Drawdown**  
**Draft Environmental Impact Statement**

---

Visual Quality .....	4-41
No Action Alternative .....	4-41
Action Alternative .....	4-41
Air Quality .....	4-41
Soils .....	4-42
No Action Alternative .....	4-42
Action Alternative .....	4-42
Social Environment .....	4-42
No Action Alternative .....	4-42
Action Alternative .....	4-43
Cumulative Impacts .....	4-43
Emergent/Riparian Vegetation .....	4-43
Fish and Wildlife .....	4-44
Recreation .....	4-45
Anadromous Fish .....	4-45
Unavoidable Adverse Impacts .....	4-45
Relationship Between Short-Term Uses and Long-Term Productivity .....	4-46
Irreversible and Irretrievable Commitments of Resources .....	4-46
 Chapter 5—Consultation and Coordination .....	 5-1
Public Involvement .....	5-1
Scoping Process .....	5-1
Public Scoping Meeting .....	5-2
Future Opportunities .....	5-3
Coordination and Consultation .....	5-4
Endangered Species Act .....	5-4
Fish and Wildlife Coordination Act .....	5-4
National Historic Preservation Act .....	5-8
Tribal Consultation .....	5-8
 Distribution List .....	 1
List of Preparers .....	7
Glossary .....	9
Bibliography .....	19
Index .....	29



---

## Appendixes

---

Appendix A—Fish and Wildlife Coordination  
 Appendix B—Scoping Summary Report  
 Appendix C—Hydrologic Report  
 Appendix D—Guidelines for Technical Management Team  
 Appendix E—Environmental Commitments

---

## Tables

---

	<i>page</i>
Table S-1.—Summary comparison of the environmental consequences of the alternatives. . . . .	S-6
Table 2-1.—Summary of Banks Lake elevation under No Action and Action Alternatives. . . . .	2-9
Table 2-2.—Summary comparison of the environmental consequences of the alternatives. . . . .	2-10
Table 3-1.—Drawdown tolerance for representative aquatic emergent plant species characteristic of the habitat at Banks Lake. . . . .	3-9
Table 3-2.—Drought tolerance of riparian species . . . . .	3-10
Table 3-3.—Characteristics of several fish species present in Banks Lake . . . . .	3-12
Table 3-4.—Wildlife of the Banks Lake littoral zone and lake surface. . . . .	3-20
Table 3-5.—Employment and income data for Grant County, 1999. . . . .	3-36
Table 3-6.—Visitation to Grand Coulee/Banks Lake area, FY 1997. . . . .	3-38
Table 3-7.—Boat launch sites and operation and maintenance responsibilities. . . . .	3-41
Table 3-8.—Total population and minority data for Grant County and Washington State. . . . .	3-46
Table 3.9.—Scenic quality ratings, Banks Lake, Washington. . . . .	3-52
Table 4-1.—Summary of impacts to several vegetative species located in the Banks Lake littoral zone. . . . .	4-7
Table 4-2.—Summary of impacts to fish habitats, species, and food. . . . .	4-13
Table 4-3.—Summary of impacts to wildlife. . . . .	4-17
Table 4-4.—Summary of impacts to species of concern. . . . .	4-19
Table 4-5.—FCRPS energy generation—No Action Alternative (MWh). . . . .	4-21
Table 4-6.—FCRPS energy generation—Action Alternative (MWh). . . . .	4-22
Table 4-7.—Net FCRPS energy impacts from Banks Lake operational changes (MWh). . . . .	4-23
Table 4-8.—GCPHA power generation—No Action Alternative. . . . .	4-24
Table 4-9.—GCPHA power generation—Action Alternative. . . . .	4-24
Table 4-10.—GCPHA power generation impacts. . . . .	4-25
Table 4-11.—Energy impacts to PUD Powerplants on the Columbia River (MWh). . . . .	4-26
Table 4-12.—Banks Lake Drawdown Study—impact analysis for recreation. . . . .	4-29

---

## **Figures**

---

	<i>page</i>
Location map . . . . .	iii
Figure S-1.—The four scenarios for the No Action Alternative. . . . .	S-5
Figure S-2.—The four scenarios for the Action Alternative. . . . .	S-5
Figure 2-1.—The range of monthly flow volumes at McNary Dam for August. . . . .	2-3
Figure 2-2.—The four scenarios for the No Action Alternative. . . . .	2-6
Figure 2-3.—The four scenarios for the Action Alternative. . . . .	2-6
Figure 3-1.—Aquatic emergent vegetation is common in Banks Lake in coves, bays and shorelines protected from wind and wave action . . . . .	3-3
Figure 3-2.—North Banks Lake. . . . .	3-5
Figure 3-3.—South Banks Lake. . . . .	3-7
Figure 3-4.—Eroding banks threaten a mature cottonwood near the Million Dollar Mile South Boat Ramp. . . . .	3-11
Figure 3-5.—Shallow unvegetated flats, like this one near Barker Flat, provide good habitat for many species of fish. . . . .	3-17
Figure 3-6.—Much of the shoreline along Banks Lake consists of sand, gravel, cobble and boulders. These areas are generally exposed to wind and wave action. . . . .	3-18
Figure 4-1.—No Action Alternative Scenarios. . . . .	4-3
Figure 4-2.—Action Alternative Scenarios. . . . .	4-4

# ACRONYMS AND ABBREVIATIONS

---

ADA	Americans with Disabilities Act
ACHP	Advisory Council on Historic Preservation
ARPA	Archeological Resources Protection Act
BASS	Bass Anglers Sportsman Society
BIOP	Biological Opinion
BLM	Bureau of Land Management
BOR	Bureau of Reclamation
BPA	Bonneville Power Administration
CAR	Coordination Act Report
CBP	Columbia Basin Project
CBWA	Columbia Basin Wildlife Area
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
cfs	Cubic feet per second
Corps	U.S. Army Corps of Engineers
CRMP	Cultural Resource Management Plan
CWA	Clean Water Act
DNR	Department of Natural Resources
DO	Denver Office
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FCRPS	Federal Columbia River Power System
FDR	Franklin Delano Roosevelt
FONSI	Finding of no significant impact
FWS	Fish and Wildlife Service
GCDA	Grand Coulee Dam Area
GCPHA	Grand Coulee Project Hydroelectric Authority
GWMA	Ground Water Management Area
Implan	Impact Analysis for Planning
ITA	Indian Trust Asset
kaf	Thousand acre-feet
kV	Kilovolt
kW	Kilowatt
kWh	Kilowatthour
LAC	Limits of Acceptable Change
LMA	Land Management Agency
MCL	Maximum contaminate levels
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding

## **Banks Lake Drawdown Draft Environmental Impact Statement**

---

MW	Megawatt
MWh	Megawatthour
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
NOI	Notice of Intent
NPS	National Park Service
O&M	Operation and maintenance
ORV	Off-road vehicle
PCPI	Per capita personal income
P/G	Pump/generator
PN	Pacific Northwest Region
PUD	Public Utility District
PWC	Personal watercraft
Reclamation	Bureau of Reclamation
RMP	Resource Management Plan
RPA	Reasonable and Prudent Alternative
RV	Recreational vehicle
Service	U.S. Fish and Wildlife Service
SHPO	Washington State Historic Preservation Office
SPRC	Washington State Parks and Recreation Commission
SRSP	Steamboat Rock State Park
STMA	Scattered Tracts Management Area
TCP	Traditional Cultural Property
TMT	Technical Management Team
USC	U.S. Code
USFS	U.S. Forest Service
USGS	U.S. Geological Survey
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources
WDOE	Washington Department of Ecology
WSIGWC	Washington State Interagency Ground Water Committee